# DIME Dynamic Documentation

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May 11, 2017

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- LaTeX allows us to create a document once and every time a do-file is run, the tables are automatically updated in our LaTeX document.

- This saves us a lot of time in the long run even though the learning curve for LaTeX is a bit complicated compared to MS Word.

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- Generates Table of Contents, list of Figures, list of tables automatically.
- Open source and standard across any version/editor of LaTeX, ShareLaTeX, etc. (not the same with Word i.e. formatting gets messed up between different version of Word).

# And....

- Documents can have comments as well. So you can write notes to yourself, future ideas which only you can read!

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- Very flexible as every setting can be defined by the user.
- Saves a lot of time in formatting.

# How does LaTeX work ?

```latex
% ------------------------------------------------ Preamble -------------------------------------------------

\documentclass{article}

% Load the packages you're going to use
\usepackage{import}                    % This package allows us to import files.
\usepackage{adjustbox}                 % This package allows you to adapt table and figure sizes to fit the page and is
required by iebaltab
\usepackage{setspace}
\usepackage{hyperref}                  % Making table of contents/figures/tables clickable, so you get to exactly that
section.
\usepackage{float}                     % This package allows us

% ------------------------------------------------ Preamble ends here -------------------------------------------------

\begin{document}

    Here comes whatever you want the content of your document to be

\end{document}
```

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- Template 1 shows how to import tables.
- Template 2 shows how to import figures.
- Template 3 displays some more advanced options and features of LᴬTEX.

# Preamble

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section.
\usepackage{float}                      % This package allows us
\usepackage{graphicx}
\usepackage{subcaption}

% Formatting packages
%\doublespacing                         % Uncomment to use double spacing
\usepackage{indentfirst}                % Indents the fist paragraph of each section
\usepackage{parskip}                    % This packages sets the spacing between two paragraphs
\setlength{\parskip}{.5\baselineskip}   % Define spacing between two paragraphs

% ADD YOUR PROJECT INFO HERE
\title{Project ABC \\ Subtitle XYZ}     %Double backslash starts a new line in \LaTeX
\author{Your Name}
\date{\today}
%\date{}                                % Uncomment this to not print date or insert specific date

% ---------------------------------------- Preamble end here ---------------------------------------------------
```

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- `\title{document_title}`
  The document title is defined in the preamble and later printed, as well as *authors* and *date*

# Headers

```
% ----------------------------------- Preamble ends here -----------------------------------

\begin{document}

\maketitle
\tableofcontents

\newpage
\listoffigures
\listoftables
```

| | |
|---|---|
| maketitle | Print the document's title, authors and date in the first page. |
| tableofcontents | Prints a summary with all the sections and subsections. |
| newpage | Insert a page break. |
| listoffigures | Prints a list of all the figures in the document. |
| listoftables | Prints a list of all the tables in the document. |

Project ABC
Subtitle XYZ

Your Name

May 9, 2017

## Contents

# Creating Sections

```
\begin{document}

\maketitle
\tableofcontents

\newpage
\section{This is the first section}
    \subsection{This is the first subsection of the first section}
        \subsubsection{This is the first subsubsection of the first subsection of the frist section}

\end{document}
```

## 1   This is the first section

### 1.1   This is the first subsection of the first section

#### 1.1.1   This is the first subsubsection of the first subsection of the first section

# Writing in your document

```
\section{Information on what you're doing}
If you need to write something related to the project, write it here before the
tables start. Otherwise you can just delete this section and just start with the
tables.

\textbf{This is a bold text.} \newline  \textit{This is an italicised text.} \\
\underline{This is an underlined text.}

%\newline starts a new line. \\ does the same.

Just pressing Enter/Return key and starting in a new line works too.

%This is a comment. I can write anything here and nobody will be able to see it
except me.
```

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**This is a bold text.**
*This is an italicised text.*
This is an underlined text.

Just pressing Enter/Return key and starting in a new line works too.

# Importing images to your document

```
\begin{figure}[H]
    \centering
    \includegraphics[width=\textwidth]{Raw/iegraph.png}
    \caption{Regular image: iegraph}
    \label{fig:my_label}
\end{figure}
```

► Each figure starts with \begin{figure} and \end{figure}

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- \caption{Name of your figure}
- \label{fig:my_label} allows you to cross-reference the figure on the text by typing \ref{fig:my_label}

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    \caption{Descriptive statistics for categorical variables}
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- If \caption comes before the table itself, the title is above it. If it comes after, the title is printed below the table.

# Fragmented documents

```
{
\def\sym#1{\ifmmode^{#1}\else\(^{#1}\)\fi}
\begin{tabular}{l*{4}{c}}
\hline\hline
        &\multicolumn{1}{c}{Total}&\multicolumn{1}{c}{Europe and Asia}&\multicolumn{1}{c}{North
America}&\multicolumn{1}{c}{South America}\\
\hline
Control   &    35    &    23    &    7    &    5    \\

Treatment &    33    &    21    &    7    &    5    \\

Total     &    68    &    44    &    14   &    10   \\
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- ▶ These are .tex files with no \begin{document} or \end{document}, so they will not compile on their own

- ▶ We could simply copy and paste this document into our main LaTeX file, but then they would not be automatically updated

# If you want to learn more

https://en.wikibooks.org/wiki/LaTeX